

Large hyperbolic circles

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The projections of large circles in R^2 onto the standard torus T^2 become equidistributed as the radius of the circles goes to infinity. In this talk, we consider the analogous problem in the hyperbolic setting; more precisely, for any compact hyperbolic surface, we provide a precise asymptotic expansion of the equidistribution rate of arbitrary circle arcs of large radius, strengthening a previous result by Bufetov and Forni. The method we use is inspired by the works of Ratner on quantitative mixing properties of the geodesic flow and of Burger.

(joint work with Emilio Corso)